



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,664	11/15/2001	Kee Tae Um	YHK-0072	7513

34610 7590 08/06/2003

FLESHNER & KIM, LLP
P.O. BOX 221200
CHANTILLY, VA 20153

EXAMINER

NGUYEN, JOSEPH H

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 08/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/987,664

Applicant(s)

UM, KEE TAE

Examiner

Joseph Nguyen

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "circular plate" in claim 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 3 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites the limitation "circular plate" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2815

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shioya et al in view of Conner et al.

Regarding claim 1, Shioya et al discloses on figures 2B and 6 a color wheel apparatus comprising a color filter 22 in which red, green and blue colors are formed in spiral shape. Shioya et al does not disclose a reflective plate opposed to the color filter to reflect an incident light reflected and emitted from the color filter into the color filter again. However, Conner et al discloses on figure 14 a reflective plate 204, 206, 208, 210, 212 opposed to the color filter to reflect an incident light reflected and emitted from the color filter into the color filter again. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shioya et al by having a reflective plate opposed to the color filter to reflect an incident light reflected and emitted from the color filter into the color filter again for the purpose of providing a single full color image and thereby a dot sequential color display as taught by Conner et al (See Abstract).

Regarding claims 2-4, Shioya et al and Conner et al together disclose all the structures set forth in the claimed invention.

Regarding claim 5, Shioya et al discloses on figures 2B and 6 substantially all the structure set forth in the claimed invention except a reflective plate opposed to the color filter to reflect an incident light reflected and emitted from the color filter into the color filter again. However, Conner et al discloses on figure 14 a reflective plate 204,

Art Unit: 2815

206, 208, 210, 212 opposed to the color filter to reflect an incident light reflected and emitted from the color filter into the color filter again. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shioya et al by having a reflective plate opposed to the color filter to reflect an incident light reflected and emitted from the color filter into the color filter again for the purpose of providing a single full color image and thereby a dot sequential color display as taught by Conner et al (See Abstract).

Regarding claims 6-8, Shioya et al and Conner et al together disclose all the structures set forth in the claimed invention.

Regarding claim 9, Shioya et al discloses on figures 2B and 6 a color wheel apparatus comprising a color filter 22 in which red, green and blue colors are formed in spiral shape. Shioya et al does not disclose a full reflecting mirror, being fixed to an incidence surface of the color wheel for reflecting an incident light reflected and emitted from the incidence surface of the color wheel toward the color wheel. However, Conner et al discloses on figure 14 a full reflecting mirror 204, 206, 208, 210, 212 being fixed to an incidence surface of the color wheel for reflecting an incident light reflected and emitted from the incidence surface of the color wheel toward the color wheel. In view of such teaching, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Shioya et al by having a full reflecting mirror, being fixed to an incidence surface of the color wheel for reflecting an incident light reflected and emitted from the incidence surface of the color wheel toward the color wheel for the

Art Unit: 2815

purpose of providing a single full color image and thereby a dot sequential color display as taught by Conner et al (See Abstract).

Regarding claims 10-15, Shioya and Conner et al disclose all the structures set forth in the claimed invention.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent 6011640 to Hutton discloses a high intensity light projector.

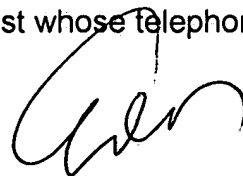
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Nguyen whose telephone number is (703) 308-1269. The examiner can normally be reached on Monday-Friday, 7:30 am- 4:30 pm

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie Lee can be reached on (703) 308-1690. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 308-7382 for regular communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

JN
July 29, 2003



EDDIE LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800